

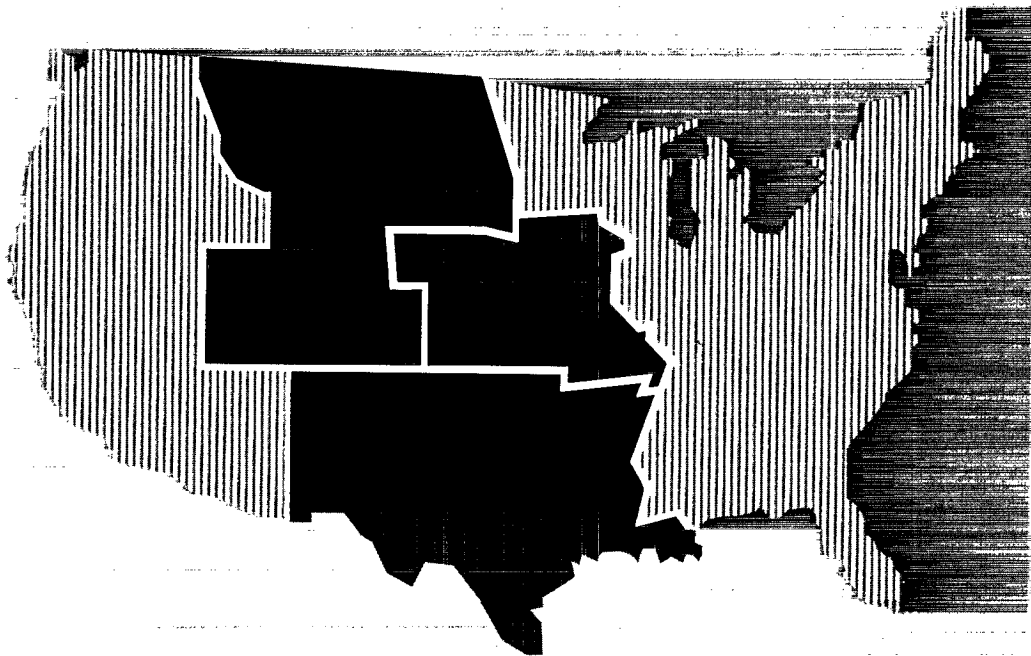
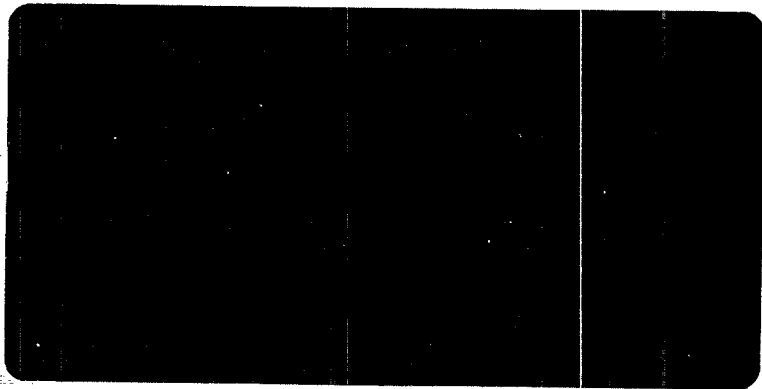
ARCS

Remedial Activities at Uncontrolled Hazardous Waste Sites in the Zone of Regions VI, VII, VIII



Contract No. 68-W8-0112

United States
Environmental Protection Agency



CHM HILL

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**Field Sampling Plan
RSR Corporation Superfund Site
Operable Unit No. 2**

**ARCS Contract No. 68-W8-0112
EPA Work Assignment No. 68-6P2H
CH2M HILL Master Project No. TXE68117**

September 1994

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**Quality Assurance Project Plan
RSR Corporation Superfund Site
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**ARCS Contract No. 68-W8-0112
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**Prepared for
U.S. Environmental Protection Agency**

**Prepared by
CH2M HILL**

September 1994

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Section 1

Field Sampling Plan Overview

1.1 Introduction

This Field Sampling Plan (FSP) was prepared for the United States Environmental Protection Agency (EPA), Region VI, in response to Work Assignment No. 68-6P2H under Contract No. 68-W8-0112 for the Dallas Housing Authority (DHA) at Operable Unit (OU) No. 2 of the RSR Corporation Superfund Site located in Dallas, Texas. The Oversight Plan covers oversight activities associated with the implementation of the final Administrative Order on Consent (AOC) between EPA and DHA. The remedial investigation/feasibility study (RI/FS) and Remedial Action (RA) activities at locations under DHA's jurisdiction are documented in the AOC. Field activities associated with OU No. 2 are described in the RI Work Plan for DHA's West Dallas Development and in the Demolition and Removal Action Plan Work Plan for DHA. The field activities to be conducted are as described in the AOC and in the final work plans and the sampling and analysis plan (SAP).

1.2 Background

The RSR Corporation Superfund Site is located in a primarily residential/light industrial section of west Dallas, just south of the Trinity River. From 1934 until 1971, a lead smelting facility located near the approximate center of the site was operated by Murph Metals, Inc., and its predecessors. In 1971, RSR Corporation acquired the lead smelting operation and established Murph Metals as an operating subsidiary. The facility continued to operate under RSR Corporation until March 1984, when it was purchased by the current owner, Murmur

Corporation. The Murrum Corporation facility consists of the smelter facility and a manufacturing and fabricating producing facility producing lead shot and foil.

As a result of a lawsuit brought by the City of Dallas and the Texas Air Control Board against RSR Corporation in 1983, the company was required to take corrective measures at the facility, which included installation of stack emission controls. RSR Corporation was also required to fund a cleanup of the residential community within 1/2-mile of the smelter. The cleanup, conducted in 1984 through 1985, required the removal of soils in the residential areas where analytical results indicated lead concentrations greater than 1,000 ppm, which was believed to be an appropriate removal level at that time. The soils were removed to a depth of 6 inches, replaced with clean fill, and covered by sod. Soils from public play areas, day care centers, and residential gardens were removed to a depth of 12 inches and replaced with washed sand or clean soil.

Also in 1983, the City of Dallas declined to renew the operating permit for the smelter. This decision was based on the facility's historical operational practices and City zoning ordinance restrictions. As a result, the smelter facility closed in 1984.

Concerns about lead contamination in the west Dallas area reemerged in 1991 when the Texas Water Commission (TWC, now the Texas Natural Resource Conservation Commission, or TNRCC) began receiving complaints from area residents about slag piles and battery ships allegedly originating from the former RSR Corporation facility. A sampling study was conducted and the results indicated many properties in the area were contaminated. Subsequently, TNRCC and EPA agreed to conduct activities necessary to identify contaminated properties in the area, and to remediate where necessary.

Soil sampling conducted by EPA in 1991 verified the presence of soil lead contamination greater than 500 ppm in residential areas surrounding the smelter facility, and the use of battery chips and slag as fill materials. As a result, EPA initiated a removal action in the

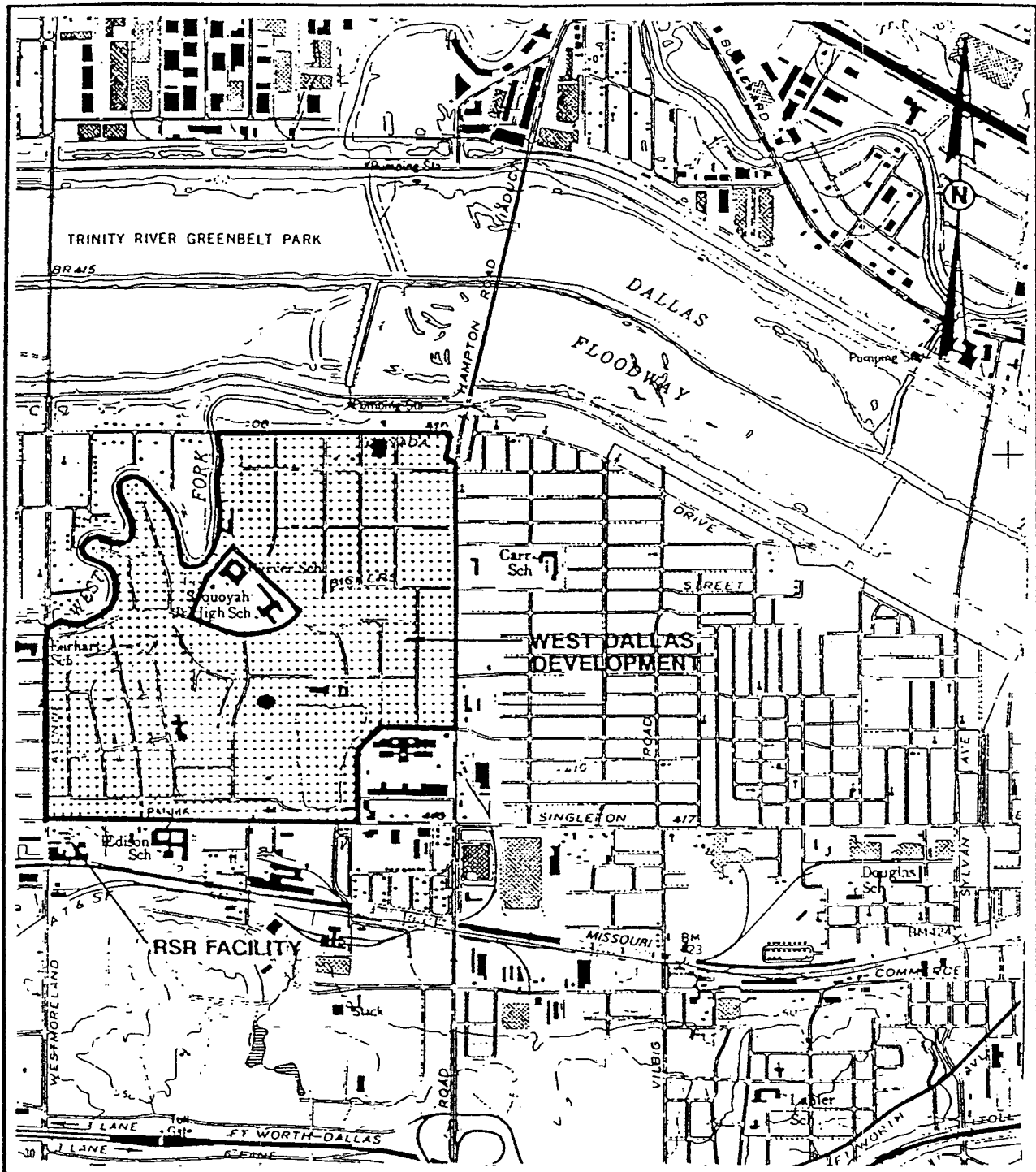
residential area adjacent to the smelter. Cleanup levels for this removal action were 500 ppm lead, 20 ppm arsenic, and 30 ppm cadmium. In addition, the TWC initiated a door-to-door residential survey and sampling investigation in 1992 to ascertain the location of areas where battery chips and slag were used as fill and to determine soil contamination levels in those areas. The TWC investigation and EPA removal action are completed, with the final reports now available.

On May 10, 1993, the EPA announced the proposal of the RSR Corporation Site to the National Priorities List (NPL) of Superfund sites. The site received a score of 50.0 based on the soil exposure pathway. Fallout from historical air emissions resulted in contamination of properties near the site. In addition, the use of battery chips and slag as residential fill materials is believed to be a significant route of exposure to the residential population in the area.

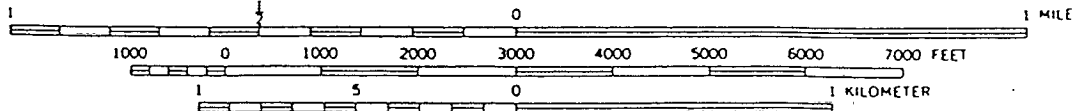
The RSR Corporation Superfund Site is currently divided into five operable units. The boundaries of the OU No. 2 are presented in Figures 1-1 and 1-2. This FSP covers activities associated with OU No. 2, which includes single and multi-family public housing developments completed in 1958. The property is presently under the jurisdiction of the DHA; it is bounded by Westmoreland Road to the west, Hampton Road to the east, Canada Drive to the north, and Singleton Boulevard to the south.

1.3 Scheduling

The proposed schedule for monitoring and sampling activities is shown in Table 1. The schedule is contingent upon weather, and the work of DHA's contractor (Rust Remedial Services, Inc., or RRS) and consultant (Jones and Neuse, Inc., or JN). RRS will be removing contaminated soil, and JN will be collecting verification samples from which CH2M HILL will take splits. A revised schedule is expected by August 1994.



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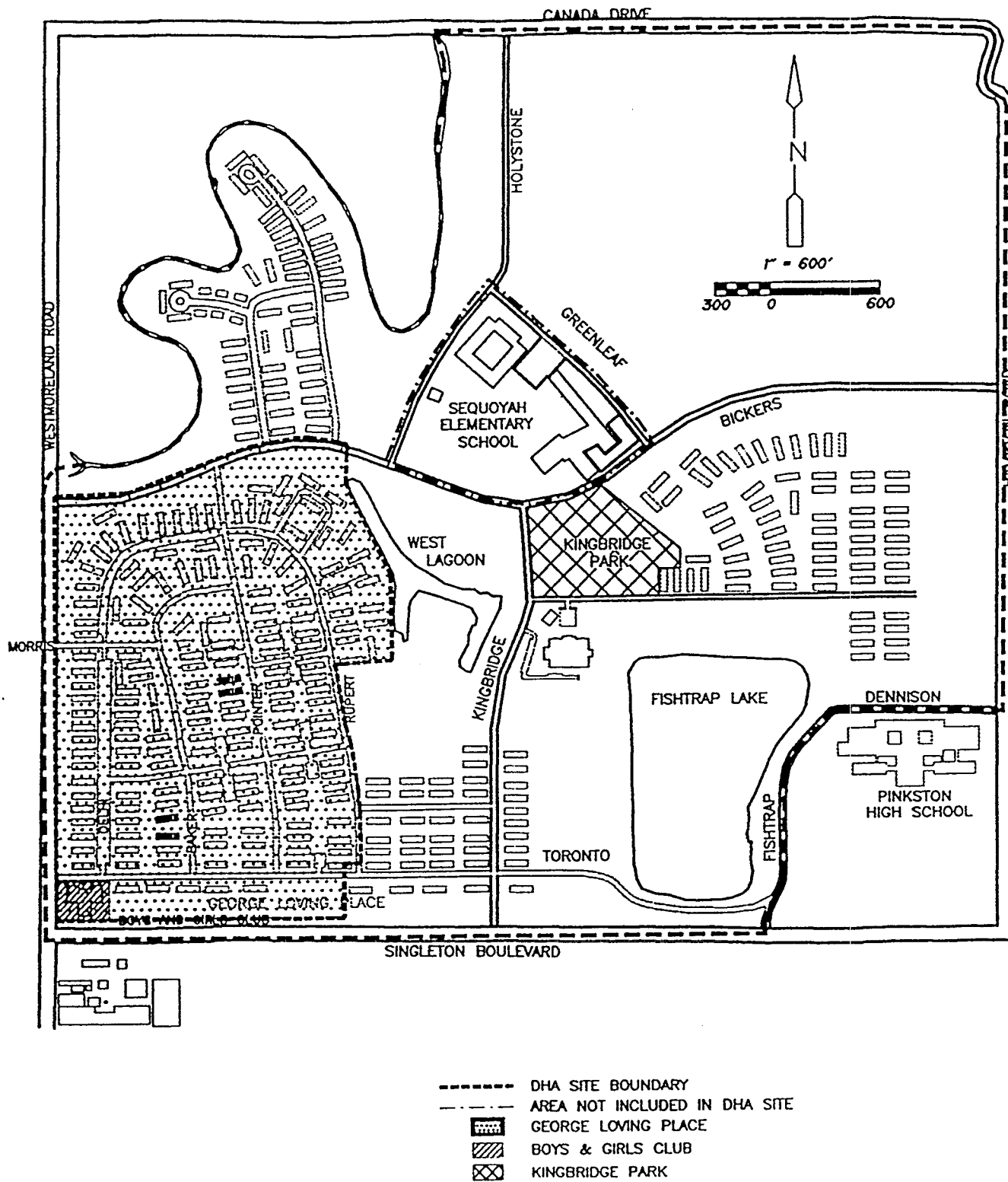
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

RSR OU-2 SITE BOUNDARY

DALLAS HOUSING AUTHORITY
DALLAS, TEXAS

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Figure 1-1



RSR OU-2 SITE BOUNDARY

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DALLAS HOUSING AUTHORITY
DALLAS, TEXAS

Figure No. 1-2

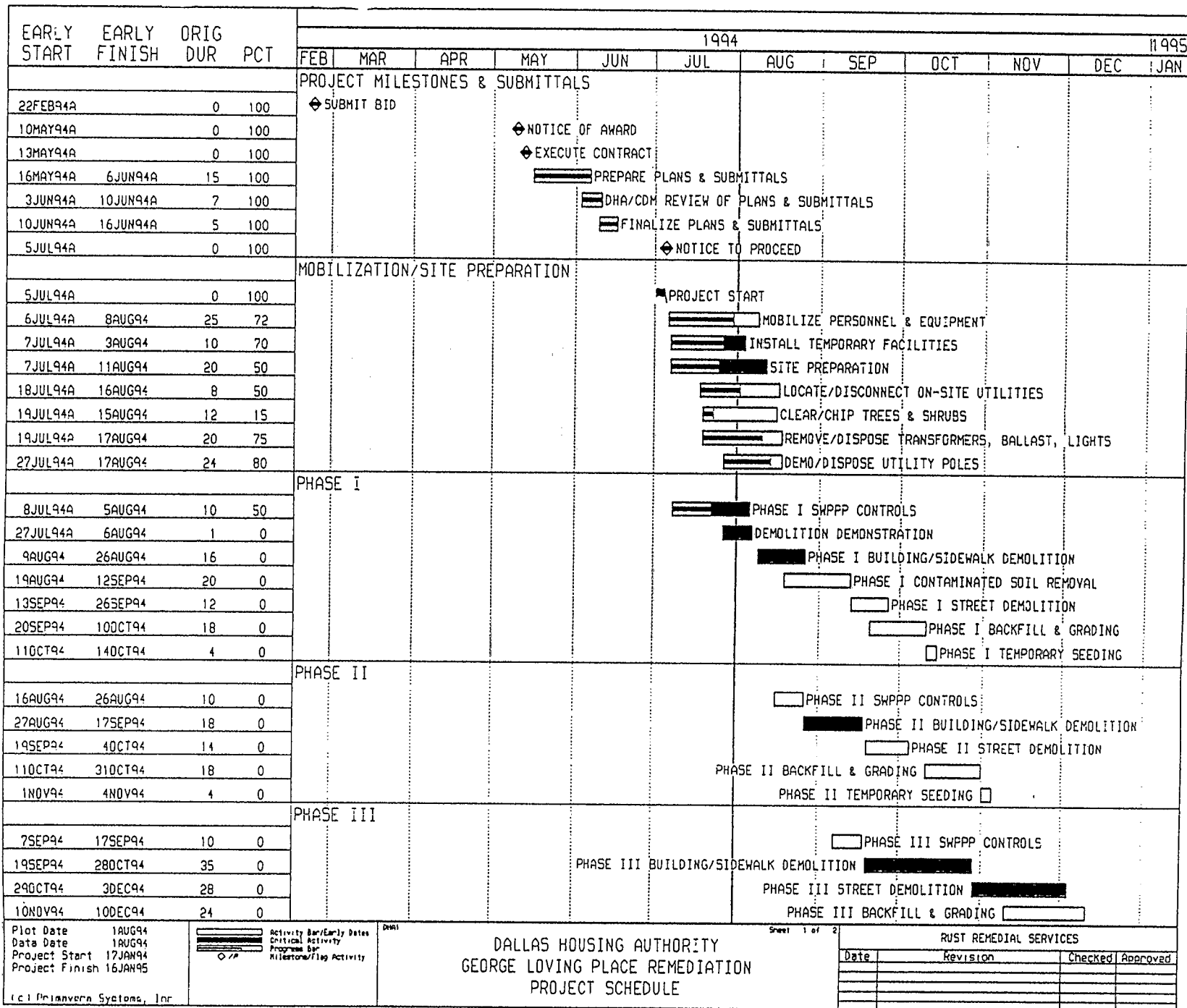


TABLE 1-1

EARLY START	EARLY FINISH	ORIG DUR	PCT	1994												1995
				FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	
12DEC94	15DEC94	4	0	PHASE III						PHASE III TEMPORARY SEEDING <input type="checkbox"/>						
24OCT94	28OCT94	5	0	PHASE IV						<input type="checkbox"/> PHASE IV SWPPP CONTROLS PHASE IV BUILDING/SIDEWALK DEMOLITION <input type="checkbox"/> PHASE IV STREET DEMOLITION <input type="checkbox"/> PHASE IV BACKFILL & GRADING <input type="checkbox"/> PHASE IV TEMPORARY SEEDING <input type="checkbox"/>						
29OCT94	15NOV94	15	0													
5DEC94	15DEC94	10	0													
19DEC94	4JAN95	12	0													
5JAN95	9JAN95	4	0													
28DEC94	6JAN95	8	0	FINAL GRADING & SEEDING						FINAL GRADING <input type="checkbox"/> PERMANENT HYDROSEEDING <input type="checkbox"/>						
7JAN95	13JAN95	6	0	DEMOBILIZATION						DEMOBILIZE <input type="checkbox"/>						
5JAN95	16JAN95	10	0													

Plot Date 1AUG94
 Data Date 1AUG94
 Project Start 17JAN94
 Project Finish 16JAN95

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

DRAW

Sheet 2 of 2

DALLAS HOUSING AUTHORITY
 GEORGE LOVING PLACE REMEDIATION
 PROJECT SCHEDULE

RUST REMEDIAL SERVICES

Date	Revision	Checked	Approved

ICI Primavera Systems, Inc

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1.4 Sample Splits

The EPA will collect a number of sample splits. Sample splits will be collected from those locations deemed to be especially significant with respect to a correct interpretation of contaminant extent. Sample splits are to be collected to provide a quality control check on the quality of analytical work being performed by DHA and JN. The split samples will be collected by JN and handed over to CH2M HILL oversight personnel.

1.5 Overview of Field Oversight Plan

The July 30, 1993, EPA Field Oversight Plan presents general procedures for providing oversight of field work associated with the RI/FS and RA for the RSR Corporation Superfund Site, OU No. 2 (DHA Property). This FSP presents information and specific instructions for oversight personnel related to field sampling activities to be performed by JN.

The following items are general procedures for field oversight of sampling activities. Specific items are found in Section 2. It will not be possible to observe, on a daily basis, all of the items listed below. Oversight personnel should concentrate on a major category of items (e.g., cross-contamination potential, paperwork, etc.) on a daily basis. Relisting each item in the oversight logbook for each site sampled is not necessary. Rather, oversight personnel should observe events, note that the checklisted items were evaluated and document any specific discrepancies observed.

The general procedures for oversight of sampling activities are as follows:

- Note the appropriate field planning documents pertinent to the activity being observed and note any amendments made to the sampling plan to reflect changes in sampling/safety procedures.

- Observe and note whether or not a representative set of field measurements (such as, pH, temperature, and conductivity) are being taken as specified in the sampling plan. Observe whether or not a representative set of initial calibrations have been made and the general frequency of calibration checks.
- Observe the documentation of field measurements.
- Sample Collection.
 - Observe the types of containers versus those specified in the sampling plan.
 - Observe that the sample is properly transferred from the sampling device to the sampling container.
 - Observe that samples are preserved as specified in the sampling plan.
 - Observe that the number and types of samples collected are as specified in the sampling plan.
 - Document sample splits that are collected.
 - Observe that field blanks are being collected.
 - Observe that rinseate samples are being collected.
- Sample collection paperwork.
 - Observe 3 days worth of sample paperwork.

- Observe that logbook entries match sample paperwork entries.
- Observe that chain-of-custody records are filled out according to the DHA/JN Field Operations Plan.
- Observe that sample tags are correctly filled out.
- Observe that the appropriate paperwork accompanies the samples in the coolers.
- Cross-contamination potential.
 - Observe that samples are collected in order, beginning with the least likely contaminated area and proceeding to the most likely contaminated area or site.
 - Observe that surgical gloves are changed often (at a minimum changed at each sampling location).
 - Observe that proper decontamination procedures for equipment and personnel are followed, as specified in the sampling plan.
 - Observe that contaminated materials are properly handled and disposed, as specified in the Plan.
 - Observe that sampling equipment is properly protected from contamination when not in use, and when transported between sites.

Section 2

Specific Procedures for Sample Splits During the Removal Action

This section of the FSP presents objectives and methods to be used for split sampling during on-site activities, which include soil excavation and disposal.

2.1 Sample Splits

Item 41 of the AOC allows EPA to receive split samples at any time upon request. It is anticipated that EPA will choose to collect sample splits at various times during fieldwork under this Removal Action. EPA and CH2M HILL will concur on locations for splits. After EPA approves these locations, CH2M HILL will inform DHA in advance of specific split samples to be collected. Details on the number of splits, the parameters to be analyzed, and the analytical procedures to be employed are described in the following paragraphs.

2.1.1 Sample Splits for Soil Excavation and Disposal

The soil excavation and disposal consists of removing the soils with concentrations above the action levels for lead, arsenic, or cadmium and its disposal. The concentrations of lead, arsenic, and cadmium in soils at George Loving Place (GLP) were determined from a previous sampling event. Soils in this area were sampled on a 50 foot by 50 foot grid system which was surveyed over the entire area. Areas where analytical results indicate soil concentrations exceeding 500 mg/Kg lead, 20 mg/Kg arsenic, or (as requested by the EPA project manager) either 30 mg/Kg cadmium or 110 mg/Kg antimony, will be excavated to minimum depth of 6 inches below land surface.

All of the blocks requiring excavation will undergo verification sampling following excavation to confirm that any residual concentrations are below the removal action limits listed above. Oversight personnel will collect split samples during the verification sampling

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at a frequency of ten percent to be analyzed for total lead, arsenic, and cadmium or antimony. Ten percent of the split samples collected will also be used for QA/QC purposes.

Final confirmation split samples will be collected following the rough grading of the site. These will be collected at the same rate as the verification sampling.

2.2 Procedures for Splitting Samples

CH2M HILL oversight personnel will:

- Describe the sample location in a field log book.
- Put on a clean pair of gloves and hand the appropriate sample container(s) to the JN sampling personnel to collect the split sample.
- Observe sampling techniques for cross-contamination, composite uniformity, handling of sample during sampling, and decontamination procedures following sample collection.
- Receive sample back from JN personnel with lid/cap in place, with date, time, and location noted.

For each sample, the following will subsequently be conducted:

- Documentation - In field log book.
- Labels - generic container label (including sampler initials, date, time, location, and preservatives) will be placed onto the side of each sample container.

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- Tape - Following labelling, clear tape will be placed over labels on the container(s).
- Custody Seal on Sample Container-- If someone other than a CH2M HILL employee delivers the sample container to the laboratory, a custody seal will be placed on each container. The custody seal will be signed, dated, and placed around the lid/cap.
- Traffic Report - The chain-of-custody/traffic report form will be completely filled out, with all sample and QA/QC information listed correctly, and signed by the sampler(s). An example of a completed traffic report for inorganics analysis is included in Appendix A.
- Packaging-- Samples will be placed in a waterproof ice chest and delivered by CH2M HILL to the laboratory, along with the chain-of-custody traffic report form.

2.3 QA/QC Samples

Quality Assurance and Quality Control (QA/QC) samples will be taken at an approximate frequency of 10 percent. This will include a duplicate. The purpose of a duplicate is to check laboratory and field procedures. Duplicates will be assigned separate numbers and be submitted blind to the lab.

These will be collected from liquid media with deionized or distilled water. The water will be used to rinse decontaminated equipment and pour the water into sample containers. Equipment blanks will be assigned a separate sample number.

QA/QC sampling activities are discussed further in the Quality Assurance Project Plan (QAPP) which has been prepared under separate cover.

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References

Camp Dresser & McKee. *Remedial Investigation/Feasibility Study Workplan for Dallas Housing Authority, Operable Unit 02.* January 1994.

Camp Dresser & McKee. *Demolition and Removal Action Workplan for Dallas Housing Authority, Operable Unit 02.* January 1994.

CH2M HILL. *Oversight Plan for Dallas Housing Authority, Operable Unit No. 2.* ARCS Contract No. 68-W8-0112. EPA Work Assignment No. 68-6P2H. July 30, 1993.

United States Environmental Protection Agency. *Administrative Order on Consent.* CERCLA Docket No. 6-21-93.

United States Environmental Protection Agency. *Sampler's Guide to the Contract Laboratory Program.* Office of Emergency and Remedial Response. Washington, D.C. 1990.

United States Environmental Protection Agency. *User's Guide to the Contract Laboratory Program.* Office of Emergency and Remedial Response. Washington, D.C. December 1988.

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Appendix A

Example of Chain of Custody/Traffic Report Form

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